	Approved For Release 2004/08/25 : CIA-RDP/8B04/48/A000600010008-8
STAT	
	May 3, 1966
	U. S. Government Washington, D.C.
STAT	Reference: , Task #03 Fask #36
	Dear Sir:
	Enclosed are three copies of the following disclosure of invention which comes within the provisions of the subject contracts;
STAT	"System for Electronically Pressing Photographic Images"
STAT	Also enclosed is a copy of NOTICE OF INTENTION NOT TO FILE AN APPLICATION FOR PATENT for the above identified disclosure.
STAT	Very truly yours.
	Government Contract Invention Records Patent Operations
	LJR:fcs Enclosures: a/s

NGA Review Complete

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	NOTICE OF INTENTION NOT TO FILE AN APPLICATION FOR PATENT	
STAT	DOCKET NO: 57,520	
	INVENTOR(S):	STAT
	TITLE: SYSTEM FOR ELECTRONICALLY PRESSING PHOTOGRAPHI GOVERNMENT GOVERNMENT	C STAT
	 A novelty search (was) (was not) made. The best known prior art (or reference of interest): 	
	None known.	
	3. Known publication or presentation, intended publication or presentation, or public use of the invention is as follows:	
·	None known.	
	4. The invention (is) (is not) incorporated in equipment built and/or delivered or to be delivered under the contract. Date: The model number is (if known):	
	5. Other pertinent comments which are believed will be of value to the Government Agency:	
	No comments.	
	6. Attached are facsimile copy(ies) of the disclosure papers required by the Government.	
	7. ALL FUTURE CORRESPONDENCE AND DEALINGS CONCERNING THE ABOVE IDENTIFIED DISCLOSURE MUST BE ADDRESSED TO THE ATTENTION OF	
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DESCRIPTIVE TITLE: System for Electronically Processing Photographic Images.

3. DETAILED DESCRIPTION: This system evolved as a result of a study of ways to fulfil the requirements of Project 36 and its extension, the present PIP

The system to be described is similar to that described in #55788 except that it is a printer (9 in. x 9 in. or larger) rather than a small area viewer. A second kinescope is used to monitor the printing process

In automatic dodring systems using a kinescope for the modulated light source it has been customary to use negative feedback in a closed loop system to provide the necessary negative light mask. Such systems are limited as to the resolution of the light mask because the video bandwidth of the system must be kept low to prevent system oscillation. A few hundred kilohertz is usually the top frequency used; see the sales publicats par The problem could be minimized using a very low TV frame scanning rate as in slow scan TV systems, but this makes the printer operate too slowly for its intended use.

Wide band, nigher speed systems have been disclosed, see ____ docket STAT #55788, using time smaring on a line by line basis and has the advantage of inherently good registration between the light mask and the transparency which produced it.

Similar systems have been disclosed, see docket #56280, using typy more kinescopes in systems which require precise registration of the scanning rasters. Such systems are also described in TIL-1 and UII-3, and in the First Interim Technical Report, issued Dec. 16, 1965 prepared for the U.S. Government Task Order STAT //03(100.762)65-R. by the

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The transparency to be contact printed is placed in direct contact with the fiber optic faceplate, emulsion side out. The unexposed film is placed in contact with the transparency, emulsion to emulsion, and the MPT (multiplier phototube) head including the light condensing system is made to rest upon them, pressing them tightly together. Pressure pads may be used but good results have been achieved over smaller areas without them.

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The monitor kinescope for adjustment purposes may be one having essentially the same electrical and brightness characteristics as the main kinescope.

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. L	The herein described invention is submitted			1000000
	pursuant to my employment agreement.		′	
	1. Date of this disclosure: Peb. 22, 1966			
	2. DESCRIPTIVE TITLE: System for Elect	ronically Proces	sing fnotogr	aphic images
	3. PURPOSE, SUMMARY AND PROBABLE USES:	To process pho	otographic im	ages so as to
	 improve their perceptibility to hu 	man observers.	The system e	mplovs a singl
	kinescope with mixed phosphors in	an open loop fee	dback system	to produce
	modulated light for contact reprodis used for monitoring the light m	uction of the in	lages. Anoth	er kinescope
	use of the system is as a modulate	d light contact	printer.	THE PLODENTE
	Answer All Questions - Use N/A when Not A			Your Files
	4. Attached hereto is "Detailed Description" comprising	ng Form Pat. 3010 (4.5)	pages and the follor	wing naners prints
	samples, etc. Fig. 1	4.37	Index mine and mine	Tales in the second sec
	5. Invention described in part 11/2, 1964, i	n Engineering Notebook	No. 19932	Pages <u>88</u>
	6. Device constructed on	19 7 Shop Order	- 44	
	8. Tested on	t Witnessed by	m opins s and an arrange of the second	
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	10. State any plans for use of the invention May be	implemented base	d on a futur	e proposal.
	man na nr mieanase eo distilio phae	ema praraton or		SIAI
	11. If this invention has been described in any publicat	ion or report, identify:		
	12. Was invention either (a) conceived or (b) first actu	ally reduced to practice	in the course of or	under Government
	Contract(s) or Subcontract(s)? (a) Yes _x No (b) Yes _ No _ If "Yes," give date:	ir res, give date:	/Son ownlands	, 19 05
	13. It answer either to 12(a) or 12(b) is "Yes" list co	ntract(s) or subcontract(s) numbers:	
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	14. Is the invention embodied in any material either (a) or Subcontract(s)? (a) Yes No _x (b) 15. If answer either to 14(a) or 14(b) is "Yes" list co	furnished or (b) to be fu	unished under Gove	rnment Contract(s)
	of Subcontract(s) f (a) ies NoX (b) 15 If answer either to $14(a)$ or $14(b)$ is "Vee" list as	res No _X rel	losar mayne s Ranswer mav	be "ves".
	(a)	ntract(s) or subcontract(s)) numbers;	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	16. Security classification of the Invention Not cla	(b)		of the state of th
	(If any part of this disclosure is classified, the disclosure should	t be appropriately stamped a	and transmitted under	security procedures.)
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	SPACE BELOW R	ESERVED FOR WITNESS	first disclosed the Invention)	
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ГАТ	is understood by me			
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"It may be a homogeneous mixture or a layer process. has made 5 in. diam. tubes on standard fac	The Tube DivisiSTATE eplates which worked as
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Scan #3 comes in at its normal position, senses the picture similar to #1, and scan #4 retraces scan #3, etc. Thus, only half the number of scanning lines is available for vertical resolution as if no shifting took place. In a system with resolution of 1000 lines to the inch or more, the vertical misregistration error due to not shifting alternate lines would be so low as to not affect the image perceptibility improvement appreciably, but for lower resolution shifting would be desirable.

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If after following this technique, line structure appears in the printed copy, the vertical frame rate may be reduced an additional amount, increasing the number of scanning lines to the point where they are indistinguishable, or vertical spot wobble may be used. A higher rate with reduced vertical resolution may be used for preliminary adjustment purposes.

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DESCRIPTIVE TITLE: System for Electronically Processing Photographic Images.

3. DETAILED DESCRIPTION:

The monitor kinescope for adjustment purposes may be one having essentially the same oldetrical and brightness characteristics as the main kinescope.

System Advantages

- 1. Inherently good registration in a simple, compact mechanical design.
- 2. Higher operating speed than in low bandwidth systems.
- 3. Higher resolution mask capability than in lower bandwidth systems.
- 4. Provision for additional enhancing without system oscillation.
- 5. Correction for system delay.

System disadvantages:

- 1. Cost. The fiber optic faceplate and the wide band video delay line are both expensive.
- 2. Lack of individual brightness controls of the two phosphor brightnesses not present in the two kinescope systems.

It seems to me, without having implemented exactly the system disclosed, that the advantages outweigh the disadvantages.

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